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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,943	01/23/2004	Naoki Matsuhira	FUM 20 860 (100794-00535)	5068
26304 7590 05/28/2008 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585				
EXAMINER				
BELANI, KISHIN G				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/763,943

**Applicant(s)**

MATSUHIRA, NAOIKI

**Examiner**

KISHIN G. BELANI

**Art Unit**

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 6 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This action is in response to Applicant's RCE filed on 02-21-2008. **Independent claim 1** has been further amended. Claims 2-7 are either as originally presented or as previously presented. Claims 5 and 6 were deemed allowable in the previous final office action dated 08-23-2007, the remaining claims 1-4 and 7 were rejected. **Claims 1-7** are now pending in the present application. The applicants' amendments to claims are shown in ***bold and italics***, and the examiner's response to the amendments is shown in **bold** in this office action.

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/17/2007 has been entered.

### ***Priority***

Acknowledgment is made of the applicant's foreign application filed in Japan on 08-30-2002. It is noted, however, that applicant has not filed a certified copy of the application as required by 35 U.S.C. 119(b), and not claimed any foreign priority. Also,

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the applicant has not met the conditions for claiming foreign priority based on the Japanese filed application.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 2, and 7** are rejected under 35 U.S.C. 102(e) as being anticipated by **Ozaki et al. (U.S. Patent Application Publication # 2004/0071148 A1)**.

Consider **claim 1**, Ozaki et al. show and disclose a router for automatically generating an IP address comprising a position identifier portion and an interface identifier portion (Fig. 1, gateway block 110; paragraph 0008, lines 1-8 which disclose a gateway device (interpreted by the examiner to be functionally equivalent to a router) automatically generating both the IPv6 interface ID and a network ID (interpreted by the examiner to be a position identifier portion of the IPv6 address)), said router comprising: a routing table for storing each position identifier portion and information on an output route for the position identifier portion, ***said routing table being referred to for routing a received IP packet to an output route corresponding to a destination position***

**identifier portion of said received IP packet** (Figs. 5, translation table block 400, and Fig. 9; paragraph 0008, lines 17-21 which disclose how the address translation table (routing table) correlates the IPv6 address with the network identifier portion; **Fig. 11 which shows the flowchart for transmitting data from a non-IP device 100 to an IP device (such as a cell-phone 130 or a laptop 140 shown in Fig. 1) via IPv6 router 120, in step 562 showing the process of acquiring destination address from the translation table; Fig. 9 also show the corresponding steps including the use of the Translation Table 400 and the structure of the incoming packet data 450 vs. the outgoing packet data 460; paragraph 0059 further discloses the details of the process shown in Figs. 9 and 11, thereby teaching that the gateway 110 not only controls a correspondence relationship between a generated IPv6 address and a network identifier, but also controls a correspondence relationship between the generated IPv6 address and an output route);**

a determining unit for determining for each of a plurality of ports **of said router** whether a position identifier portion is assigned to **an IP** network to which the port is connected (paragraph 0003, lines 1-4 which disclose that a combination of an IP address and a port number is used as an IP identifier for each of a plurality of ports connected to a network; paragraph 0005, lines 1-8 which disclose that the gateway can assign a unique IP address even to a non-IP device; paragraph 0008, lines 11-13 which disclose that the gateway device has a network ID acquisition unit for acquiring the network ID of the IP network; Fig. 5 and paragraph 0043, lines 5-12 that disclose a translation table 400 used for uniquely associating a device address to a network ID; **Fig. 1 which clearly**

**shows that the said gateway not only supports a non-IP device 100 on a non-IP network 200, but also an IP device 150 on an IPv6 network 230; paragraph 0005 further states that the said gateway device can assign a unique IP address even to a non-IP device, thereby teaching that the gateway is quite capable of supporting any IPv6 device as well, as is clearly shown in Fig. 1);**

a position identifier portion generating unit for using all of said position identifier portions registered in said routing table and **newly**-generating a position identifier portion different from all of the position identifier portion registered in said routing table for a port when said determining unit determines that the position identifier portion is not assigned to the port (Fig. 5; paragraph 0005, lines 1-8 which disclose that the gateway assigns unique IP address to each device connected to a non-IP network; the gateway has to search the translation table 400 for all the entries registered in the table to either find a match or if there is no match, to register a new entry; **Fig. 5, Table 400 that shows a correspondence between a local address 411 and an IPv6 address 412, such that when a new non-IP device is attached to a port of the said gateway, a new entry will have to be made in Table 400 to associate the local address of the device with a newly-generated IPv6 address for the device, so the messages from/to the new device can be appropriately routed**);

a routing unit for receiving routing information including a position identifier portion according to a dynamic routing protocol and registering the routing information in said routing table, and registering routing information including the position identifier portion generated by said position identifier portion generating unit in said routing table and

notifying another router of the routing information (Fig. 7, block 120 in which an IPv6 router provides a network ID to a routing unit of the gateway and a register block 504 for recording the network ID in the registration data block 700, which is the routing table; paragraph 0046 that details the translation table registration process; paragraph 0049, lines 6-12 that describe a method for finding the address of the lower layer of the IPv6 using NDP (Neighborhood Discovery Protocol); Fig. 8, blocks 533 and 120; paragraph 0050, lines 3-15 which describe how the NDP is used to notify other routers of the routing information); and

a position identifier portion advertising unit for advertising the generated position identifier portion from the port on the position identifier portion (Fig. 7, block 511; Fig. 8, blocks 533 and 120 that show the advertising unit for port's generated IPv6 address; paragraph 0050, lines 3-15 which describe the process of broadcasting the generated IPv6 address using NS (neighbor solicitation) packet).

Consider **claim 2**, and **as applied to claim 1 above**, Ozaki et al. clearly show and disclose a router wherein said determining unit determines whether a position identifier portion is assigned to the network to which the port is connected on the basis of whether a position identifier portion advertised according to a neighbor discovery protocol for IPv6 is received from said port (Fig. 8; paragraph 0049, lines 9-12 that describe a method for finding the address of the lower layer of the IPv6 using NDP (neighbor discovery protocol); and paragraph 0050, lines 3-15 which disclose that after the gateway detects a NS (neighbor solicitation) packet destined for the port, it sets the

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address of the lower layer of the IP in a neighbor advertisement packet and transmits it to the router 120).

Consider **claim 7**, and **as applied to claim 1 above**, Ozaki et al. clearly show and disclose a router comprising a routing unit for receiving routing information including a position identifier portion according to a dynamic routing protocol and registering the routing information in said routing table, and notifying another router of routing information including the position identifier portion generated by said position identifier portion generating unit (Fig. 7, block 120 in which an IPv6 router provides a network ID to a routing unit of the gateway and a register block 504 for recording the network ID in the registration data block 700, which is the routing table; paragraph 0046 that details the translation table registration process; paragraph 0049, lines 6-12 that describe a method for finding the address of the lower layer of the IPv6 using NDP (Neighborhood Discovery Protocol); Fig. 8, blocks 533 and 120; paragraph 0050, lines 3-15 which describe how the NDP is used to notify other routers of the routing information).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ozaki et al. (U.S. Patent Application Publication # 2004/0071148 A1)** in view of **Miyata et al. (U.S. Patent Application Publication # 2005/0100008 A1)**.

Consider **claim 3**, and **as applied to claim 1 above**, Ozaki et al. show and disclose the claimed invention except a router in which said position identifier portion generating unit generates said position identifier portion by generating a random number.

In the same field of endeavor, Miyata et al. disclose generating the position identifier portion of the IPv6 address using a random number generating scheme (Figs. 28, blocks 503-509; Figs. 29-31; paragraph 0100, lines 5-8 that describe using a random address creation method for an IPv6 address; paragraph 0101 that describes the same details).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to generate the position identifier portion of the IPv6 address using a random number generating scheme, as taught by Miyata et al. in the

gateway of Ozaki et al., so that unique IPv6 addresses can be generated without delaying the network by spending too much computational power.

Consider **claim 4**, and **as applied to claim 1 above**, Ozaki et al. as modified by Miyata et al. show and disclose the claimed invention except a router in which said position identifier portion generating unit generates said position identifier portion by incrementing a maximum position identifier portion registered in said routing table.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to also consider providing a method for generating the position identifier address by sequentially incrementing the maximum (highest) position identifier address registered in the said routing table. Applicant has not disclosed that providing a method for generating the position identifier address by sequentially incrementing the maximum position identifier address registered in the said routing table provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the position identifier portion being generated by a random number generation method, as taught by Miyata et al. in the gateway of Ozaki et al., because a 16-bit random number can be generated very quickly in a 16-bit shift register made from latches, and would generate a unique address for use as a Site-local aggregation address.

***Allowable Subject Matter***

**Claims 5 and 6** were previously modified to overcome the objections raised in the non-final office action dated 03/14/2007, and are therefore deemed allowable.

***Response to Arguments***

Applicant's arguments filed 02/21/2008 have been fully considered but they are not persuasive.

The examiner respectfully disagrees with applicant's arguments as the applied reference(s) provide more than adequate support and clarification. The examiner's previous **rejection of 08/23/2007 for non-allowable claims 1-4 and 7 is maintained**. The reasons for maintaining the rejection are listed below:

Consider **claim 1**. The applicant argues that the cited reference of Ozaki et al. (US Patent Application Publication 2004/0071148 A1) does not teach controlling a correspondence relationship between the generated IPv6 address and an output route. In rejecting the amended claim 1 above, the examiner has cited figures and paragraphs from the Ozaki reference that clearly support the claimed feature of controlling an output route. Therefore, the response is not repeated here.

The applicant further argues that the cited reference is teaching support only for non-IP devices on a non-IP network. The examiner respectfully disagrees. Again, as already described in the rejection for claim 1 above, Fig. 1 in the Ozaki reference clearly shows the said gateway 110 supporting not only a non-IP device 100 on a non-IP network 200, but also an IPv6 device 150 on a IPv6 network 230. The Ozaki reference

just emphasizes the non-IP device features because that is their main inventive feature, the support for IPv6 capable devices being the normal support for the said gateway.

Furthermore, the applicant argues that the Ozaki reference does not disclose judging whether or not an IP address is assigned to each of a plurality of nodes connected to an IP network. The examiner begs to differ. The 128-bit IPv6 address is made up of 2 major components, a network component and a device interface component. The 64-bit network component designates the network to which the communicating devices are connected to, whereas the 64-bit device interface component is uniquely generated and assigned to a device (IP enabled or non-IP device) in order to distribute the traffic directed towards the said gateway from the network to the individual devices connected to different ports of the gateway. The tables shown in Fig. 4-6 collectively accomplish this function. To build and maintain these tables, the gateway has to search and determine whether or not an IP address is assigned to each of a plurality of nodes connected to an IP network. The examiner has therefore deemed **claims 1, 2 and 7 not to be allowable**. The applicant has presented no new argument in support of allowing claims 3 and 4, except stating that the Miyata et al. reference does not overcome the alleged deficiencies of the Ozaki et al. reference. Therefore, **claims 3 and 4 are also not considered allowable**.

### ***Conclusion***

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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P.O. Box 1450  
Alexandria, VA 22313-1450

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**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kishin G. Belani whose telephone number is (571) 270-1768. The Examiner can normally be reached on Monday-Friday from 6:00 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-0800.

***Kishin G. Belani***

K.G.B./kgb

May 22, 2008

/Ashok B. Patel/

Primary Examiner, Art Unit 2154